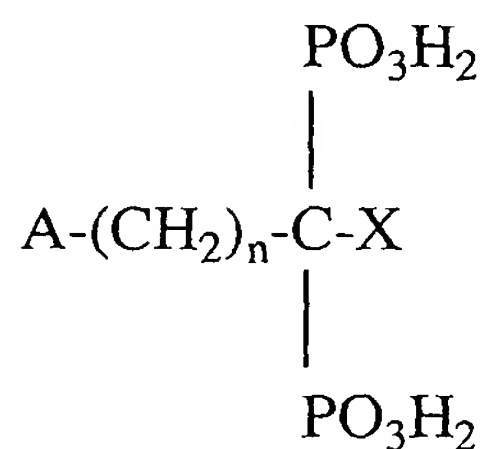


## WHAT IS CLAIMED IS:

1. A method of preventing or reducing the risk or incidence of skeletal injuries in horses comprising administering a therapeutically effective amount of a bisphosphonate or a pharmaceutically acceptable salt thereof or ester thereof or mixtures thereof.

2. The method of Claim 1 wherein said bisphosphonate corresponds to the chemical structure



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wherein n is an integer from 0 to 7 and wherein A and X are independently selected from the group consisting of H, OH, halogen, NH<sub>2</sub>, SH, phenyl, C1-C30 alkyl, C3-C30 branched or cycloalkyl, C1-C30 substituted alkyl, C1-C10 alkyl substituted NH<sub>2</sub>, C3-C10 branched or cycloalkyl substituted NH<sub>2</sub>, C1-C10 dialkyl substituted NH<sub>2</sub>, C1-C10 alkoxy, C1-C10 alkyl substituted thio, thiophenyl, halophenylthio, C1-C10 alkyl substituted phenyl, pyridyl, furanyl, pyrrolidinyl, imidazolyl, imidazopyridinyl, and benzyl, such that both A and X are not selected from H or OH when n is 0; or A and X are taken together with the carbon atom or atoms to which they are attached to form a C3-C10 ring; and the pharmaceutically acceptable salts thereof and esters thereof.

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3. The method of Claim 1 wherein said bisphosphonate is selected from the group consisting of alendronate, cimadronate, clodronate, tiludronate, etidronate, ibandronate, neridronate, olpadronate, risedronate, piridronate, pamidronate, zoledronate, pharmaceutically acceptable salts thereof, esters thereof, and mixtures thereof.

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4. The method of Claim 3 wherein said bisphosphonate is alendronate, pharmaceutically acceptable salts thereof, esters thereof, and mixtures thereof.

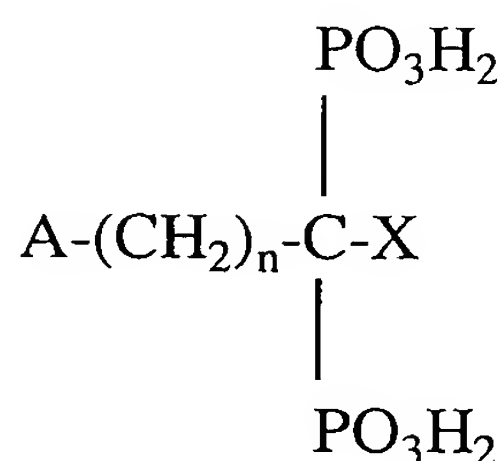
5. The method of Claim 4 wherein said pharmaceutically acceptable salt is selected from the group consisting of sodium, potassium calcium, magnesium, and ammonium salts.

6. The method of Claim 5 wherein said pharmaceutically acceptable salt is a sodium salt.

7. The method of Claim 6 wherein said pharmaceutically acceptable salt is alendronate monosodium trihydrate.

8. A method of alleviating pain associated with skeletal injuries in horses comprising administering a therapeutically effective amount of a bisphosphonate or a pharmaceutically acceptable salt thereof or ester thereof or mixture thereof.

9. The method of Claim 8 wherein said bisphosphonate corresponds to the chemical structure



wherein n is an integer from 0 to 7 and wherein A and X are independently selected from the group consisting of H, OH, halogen, NH<sub>2</sub>, SH, phenyl, C1-C30 alkyl, C3-C30 branched or cycloalkyl, C1-C30 substituted alkyl, C1-C10 alkyl substituted NH<sub>2</sub>, C3-C10 branched or cycloalkyl substituted NH<sub>2</sub>, C1-C10 dialkyl substituted NH<sub>2</sub>, C1-C10 alkoxy, C1-C10 alkyl substituted thio, thiophenyl, halophenylthio, C1-C10

alkyl substituted phenyl, pyridyl, furanyl, pyrrolidinyl, imidazolyl, imidazopyridinyl, and benzyl, such that both A and X are not selected from H or OH when n is 0; or A and X are taken together with the carbon atom or atoms to which they are attached to form a C3-C10 ring; and the pharmaceutically acceptable salts thereof or esters thereof.

10. The method of Claim 8 wherein said bisphosphonate is selected from the group consisting of alendronate, cismadronate, clodronate, tiludronate, etidronate, ibandronate, neridronate, olpadronate, risedronate, piridronate, pamidronate, zoledronate, pharmaceutically acceptable salts thereof, esters thereof, and mixtures thereof.

11. The method of Claim 10 wherein said bisphosphonate is alendronate, pharmaceutically acceptable salts thereof, esters thereof, and mixtures thereof.

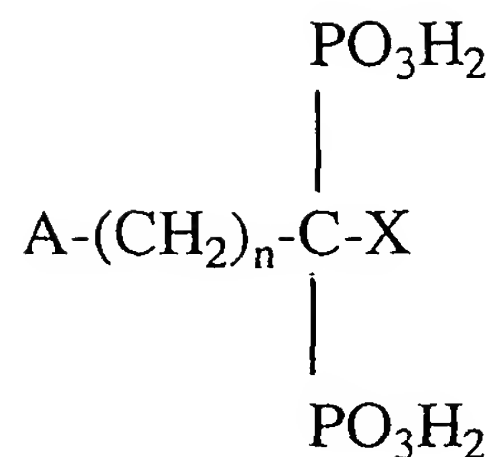
12. The method of Claim 11 wherein said pharmaceutically acceptable salt is selected from the group consisting of sodium, potassium calcium, magnesium, and ammonium salts.

13. The method of Claim 12 wherein said pharmaceutically acceptable salt is a sodium salt.

14. The method of Claim 13 wherein said pharmaceutically acceptable salt is alendronate monosodium trihydrate.

15. A method for treating skeletal injuries in horses comprising administering a therapeutically effective amount of a bisphosphonate or a pharmaceutically acceptable salt thereof or ester thereof or mixture thereof.

16. The method of Claim 15 wherein said bisphosphonate corresponds to the chemical structure



wherein n is an integer from 0 to 7 and wherein A and X are independently selected from the group consisting of H, OH, halogen, NH<sub>2</sub>, SH, phenyl, C1-C30 alkyl, C3-  
 5 C30 branched or cycloalkyl, C1-C30 substituted alkyl, C1-C10 alkyl substituted NH<sub>2</sub>, C3-C10 branched or cycloalkyl substituted NH<sub>2</sub>, C1-C10 dialkyl substituted NH<sub>2</sub>, C1-C10 alkoxy, C1-C10 alkyl substituted thio, thiophenyl, halophenylthio, C1-C10 alkyl substituted phenyl, pyridyl, furanyl, pyrrolidinyl, imidazolyl, imidazopyridinyl, and benzyl, such that both A and X are not selected from H or OH when n is 0; or A  
 10 and X are taken together with the carbon atom or atoms to which they are attached to form a C3-C10 ring; and the pharmaceutically acceptable salts thereof, or esters thereof.

17. The method of Claim 15 wherein said bisphosphonate is  
 15 selected from the group consisting of alendronate, cismadronate, clodronate, tiludronate, etidronate, ibandronate, neridronate, olpadronate, risedronate, piridronate, pamidronate, zoledronate, pharmaceutically acceptable salts thereof, esters thereof, and mixtures thereof.

18. The method of Claim 17 wherein said bisphosphonate is  
 20 alendronate, pharmaceutically acceptable salts thereof, esters thereof, and mixtures thereof.

19. The method of Claim 18 wherein said pharmaceutically  
 25 acceptable salt is selected from the group consisting of sodium, potassium calcium, magnesium, and ammonium salts.

20. The method of Claim 19 wherein said pharmaceutically acceptable salt is a sodium salt.

21. The method of Claim 20 wherein said pharmaceutically acceptable salt is alendronate monosodium trihydrate.

5                   22. The use of a bisphosphonate or a pharmaceutically acceptable salt thereof or ester thereof or mixture thereof for preventing or reducing the risk or incidence of skeletal injuries in horses.

10                   23. The use of a bisphosphonate or a pharmaceutically acceptable salt thereof or ester thereof or mixture thereof for alleviating pain associated with skeletal injuries in horses.

15                   24. The use of a bisphosphonate or a pharmaceutically acceptable salt thereof or ester thereof or mixture thereof for treating skeletal injuries in horses.

                    25. The use of a bisphosphonate or a pharmaceutically acceptable salt thereof or ester thereof or mixture thereof in the manufacture of a medicament for preventing or reducing the risk or incidence of skeletal injuries in horses.

20                   26. The use of a bisphosphonate or a pharmaceutically acceptable salt thereof or ester thereof or mixture thereof in the manufacture of a medicament for alleviating pain associated with skeletal injuries in horses.

25                   27. The use of a bisphosphonate or a pharmaceutically acceptable salt thereof or ester thereof or mixture thereof in the manufacture of a medicament for treating skeletal injuries in horses.

30                   28. A pharmaceutical composition for preventing or reducing the risk or incidence of skeletal injuries in horses comprising a therapeutically effective amount of a bisphosphonate or a pharmaceutically acceptable salt thereof or ester thereof or mixture thereof.

                    29. A pharmaceutical composition for alleviating pain associated with skeletal injuries in horses comprising a therapeutically effective amount of a

bisphosphonate or a pharmaceutically acceptable salt thereof or ester thereof or mixture thereof.

5                   30.     A pharmaceutical composition for treating skeletal injuries in horses comprising a therapeutically effective amount of a bisphosphonate or a pharmaceutically acceptable salt thereof or ester thereof or mixture thereof.

10                   31.     A method of treating or preventing glucocorticoid induced bone loss in horses comprising administering a therapeutically effective amount of a bisphosphonate or a pharmaceutically acceptable salt thereof or ester thereof or mixtures thereof.

15                   32.     The use of a bisphosphonate or a pharmaceutically acceptable salt thereof or ester thereof or mixture thereof for treating or preventing glucocorticoid-induced bone loss in horses.

20                   33.     The use of a bisphosphonate or a pharmaceutically acceptable salt thereof or ester thereof or mixture thereof in the manufacture of a medicament for treating or preventing glucocorticoid-induced bone loss in horses.

25                   34.     A pharmaceutical composition for treating or preventing glucocorticoid-induced bone loss in horses comprising a therapeutically effective amount of a bisphosphonate or a pharmaceutically acceptable salt thereof or ester thereof or mixture thereof.